

CLAIM STATUS

1. (Currently Amended) A method for treating water comprising the steps of:
 - a) providing at least two treatment tanks, each tank defining a water treatment compartment containing water treatment material including carbon;
 - b) communicating a source of water to be treated with each of said treatment tanks ~~at least one of said treatment tanks~~;
 - c) passing said water to be treated through said treatment tanks ~~one treatment tank~~;
 - d) determining when one of said tanks ~~said one tank~~ requires regeneration;
 - e) upon determining that one of said treatment tanks ~~said one tank~~ requires regeneration, terminating said communication of said source with said one tank and effecting regeneration of said one tank while the other tank continues to treat source water, said regeneration including the step of passing an oxidant solution through said one treatment tank, said oxidant solution being ~~drawn from a reservoir~~; drawn from a reservoir; and
 - f) re-communicating said source water to be treated with said regenerated tank.
2. (Original) The method of claim 1, wherein said step of determining when said one tank requires regeneration comprises the step of monitoring the quantity of water passed through said one treatment tank.
3. (Original) The method of claim 1, wherein said carbon comprises catalytic carbon.
4. (Original) The method of claim 1, wherein said step of passing said oxidant solution through said one treatment tank occurs in a counterflow direction for a predetermined time.
5. (Previously Presented) The method of claim 1, wherein said regeneration further includes the steps of:
 - a) terminating the flow of oxidant solution from said reservoir; and,

- b) passing water through said treatment tank in a counterflow direction for a predetermined time sufficient to flush said treatment tank of said oxidant solution.
6. (Original) The method of claim 3, further comprising the step of passing water through said treatment tank in a counterflow direction for a predetermined time, prior to initiation of said regeneration in order to fluff the catalytic carbon prior to regeneration.
7. (Original) The method of claim 1, wherein said oxidant solution is a bleach solution.
8. (Original) The method of claim 1, wherein said oxidant solution is a hydrogen peroxide solution.
9. (Original) The method of claim 7, wherein said bleach solution is in the range of about 2% to about 15% sodium hypochlorite.
10. (Original) The method of claim 8, wherein said hydrogen peroxide solution contains hydrogen peroxide in the range of about 2% to about 35%.
11. (Original) The method of claim 1, further comprising the step of communicating said source of water to be treated with said other tank during regeneration of said one tank.
12. (Cancelled)
13. (Cancelled)
14. (Original) A method for treating water, comprising the steps of:
 - a) providing at least two treatment tanks, each tank defining a water treatment compartment containing water treatment material including a carbon bed;
 - b) communicating a source of water to be treated with ~~at least one of said treatment tanks, while isolating the other treatment tank from said source of water to be treated;~~

- c) passing said water to be treated through said treatment tanks ~~said one treatment tank~~ in a first direction until it is determined that one of said treatment tanks ~~said one treatment tank~~ requires regeneration;
- d) upon determining that one of said tanks ~~said one tank~~ requires regeneration, terminating said communication of said source of water with ~~said one tank and communicating a tank to be treated while maintaining communication of~~ said source of water to be treated with said other tank;
- e) effecting regeneration of ~~said one tank~~ said tank to be treated by:
 - i) passing water through said ~~one treatment tank~~ treatment tank in a counterflow direction for a predetermined time in order to fluff said carbon bed;
 - ii) conveying an oxidant solution from a reservoir to the treatment tank ~~said one tank~~ and passing said solution through said carbon bed in a counterflow direction for a predetermined time;
 - iii) terminating said flow of oxidant solution and rinsing said ~~one treatment tank~~ treatment tank by passing water through said carbon bed in a counterflow direction until said oxidant solution is flushed from said carbon bed;
 - iv) passing water through said carbon bed in said first flow direction for a predetermined time sufficient to compact the bed; and ~~compact the bed.~~
- f. re-communicating the regenerated tank with said source of water.

15. (Currently Amended) A method of removing a substance containing sulfur, from water comprising the steps of:

- a) providing at least two treatment tanks, each tank containing a water treatment material including carbon;

- b) providing a controller for controlling the communication of source water to be treated with said tanks, said controller controlling when a treatment tank is on-line and when a treatment tank is off-line;
- c) providing a reservoir of oxidant solution and a mechanism to control a regeneration of an off-line tank;
- d) placing ~~one of said~~ said treatment tanks on-line;
- e) passing water through said treatment tanks ~~said one treatment tank~~;
- f) monitoring water usage and placing one of said treatment tanks off-line ~~said one tank off-line~~ when it is determined that a tank ~~said one tank~~ requires regeneration while keeping the second tank online to continually treat water during the regeneration of the other tank;
- g) regenerating said one tank by drawing said oxidant solution from said reservoir and passing it through ~~said one tank~~ said one tank; and
- f) placing the regenerated tank back online.

16. (Original) The method of claim 15, wherein ~~said other tank is on-line when said one tank is being regenerated and~~ the regeneration of said tank requiring regeneration ~~one tank further~~ includes the step of rinsing said one tank by passing treated water discharged by said other tank through said one tank.

17. (Original) The method according to claim 16, wherein the drawing of said oxidant solution from said reservoir is achieved using a venturi to which treated water from said other tank is communicated during regeneration of said one tank.

18. (Original) The method according to claim 16, wherein the oxidant solution in said reservoir is drawn through a restrictor.

19. (Currently Amended) A method for removing a substance containing sulfur, from water comprising the steps of:

- a) providing a treatment tank containing a treatment bed that includes carbon;
- b) providing a controller for controlling the communication of source water to be treated with said tank and for controlling the regeneration of said tank when regeneration is needed;
- c) passing water to be treated through said treatment tank in order to remove said substance;
- d) monitoring water usage to determine when said tank requires regeneration;
- e) providing a reservoir of oxidant solution;
- f) terminating the communication of said source water with said tank when it is determined that regeneration of said tank is required;
- g) regenerating said tank by drawing oxidant solution from said reservoir and passing it through said tank;
- h) rinsing said tank with a rinse water to flush said oxidant solution from said tank; and oxidant solution from said tank.
- i) re-communicating the regenerated tank with said source water to be treated.

20. (Withdrawn) A water treatment apparatus, comprising:

- a) at least two water treatment tanks each defining a fluid flow path including a compartment containing carbon through which water to be treated is passed;
- b) a controller for controlling the communication of water to be treated with said tanks;

c) a monitor for determining when an on-line tank needs to be taken off-line and regenerated; and,

d) a regeneration controller including valving for communicating an oxidant solution from a reservoir to an off-line tank.

21. (Withdrawn) The apparatus of claim 20, wherein said oxidant solution is drawn from said reservoir through a restrictor comprising a capillary tube.

22. (Withdrawn) The apparatus of claim 21, wherein a check valve is located upstream of said capillary.

23. (Withdrawn) The apparatus of claim 21, wherein a venturi located upstream of said capillary dilutes the oxidant solution to a predetermined level.

24. (Withdrawn) The apparatus of claim 21, wherein a filter is located downstream of said capillary.

25. (Withdrawn) The apparatus of claim 20, further comprising a means for fast rinsing said off-line tank in a service direction, said fast flow rinse means including a differential pressure operated purge valve that is responsive to fluid pressures applied to inlet and outlet valves associated with each water treatment tank.

26. (Withdrawn) A water treatment apparatus, comprising:

a) a water treatment tank defining a fluid flow path including a compartment containing catalytic carbon through which water to be treated is passed;

b) controller for controlling the communication of water to be treated with said tank;

c) monitoring means for determining when the tank requires regeneration; and,

d) regeneration controller including valving for communicating an oxidant solution from a reservoir to the tank when regeneration is required.

27. (Withdrawn) The apparatus of claim 26, wherein said oxidant solution is drawn through a restrictor.

28. (Withdrawn) The apparatus of claim 27, wherein said restrictor comprises a capillary tube.

29. (Withdrawn) The apparatus of claim 28, wherein a check valve is located upstream of said capillary tube.

30. (Withdrawn) The apparatus of claim 28, wherein a venturi located upstream of said capillary tube dilutes the oxidant solution to a predetermined level.

31. (Withdrawn) The apparatus of claim 30, wherein a filter is located downstream of said capillary tube.